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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/627,023

07/25/2003

Zhi-Min Choo

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EXAMINER

TRAN, NHAN T

ART UNIT

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2622

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/627,023	Applicant(s) CHOO, ZHI-MIN	
	Examiner NHAN T. TRAN	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5/14/2008 & 4/21/2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-28 and 31-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25-28 is/are allowed.
- 6) ☒ Claim(s) 31-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/14/2008 has been entered.

Response to Arguments

2. Applicant's arguments filed 5/14/2008 with respect to claims 31-49 have been fully considered but they are not persuasive.

The Applicant asserts that:

(i) The specification of Shibata fails to disclose or suggest that the hinge is located at one lateral end portion of the upper end portion of the lower body, as recited in independent claims 31 and 35 because the hinge or "opening/shutting axis 31" of Shibata is located at a center portion of an upper end portion of the lower body, not at one lateral end portion of the upper end portion of the lower body (Applicant's remarks, pages 9-10).

(ii) Yoshida cannot be combined with the asserted folding type mobile communication terminal of Shibata as asserted by the Examiner due to the insufficient

space in the asserted zoom camera 33 of Shibata to accommodate the asserted optical zoom camera of Yoshida.

In response, the Examiner understands the Applicant's arguments but respectfully disagrees for the following reasons:

(i) It is clearly seen in Figs. 1 & 3 that the hinge (opening/shutting axis 31) is located at the upper end portion of the lower body (10) toward the lateral end portion of the upper end portion of the lower body (see Fig. 1 where the axis 31 is clearly seen at this lateral end portion). It cannot be said that Shibata fails to teach this feature since it's apparently shown in Figs. 1, 3 and 16 of Shibata. This is also a common practice for a hinge in a foldable-type camera phone. Furthermore, Fig. 16 of Shibata shows the substantially identical structure of the camera phone as Applicant's claimed invention of Fig. 3.

(ii) The Applicant appears to include the exact whole 3x optical system of Yoshida into camera phone of Shibata in the arguments so as to make an *unobviousness* case over the Applicant's claimed invention for the reason that the camera phone of Shibata has insufficient space to incorporate this optical system. However, one skilled in the art would not incorporate the exact same optical system of Yoshida into the camera phone of Shibata but rather to incorporate the suggestion of using an optical zoom in a camera phone taught by Yoshida. One skilled in the art would implement an optical zoom lens and its drive mechanism for Shibata's camera without the need to use the exact 3x zoom from Yoshida but could use 2x or less zoom system. The important matter is that Shibata does not teach away from using an optical

zoom system and it is also clearly seen from Fig. 3 of Shibata that the implementation of an optical zoom system is feasible and expected. Thus, the modification of Shibata's camera phone in view of the suggestion from Yoshida is proper to provide an optical zoom system to improve image resolution in comparison to the digital zoom where the resolution is loss.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 40 and 45 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Each of claims 40 and 45 recites, "the terminal manipulation device is located on at least one lateral surface of the upper body." However, the specification and drawings do not disclose or suggest any terminal manipulation device that is located on a lateral surface of the upper body.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 31-39, 41 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata et al. (US 7,084,919) in view of Yoshida et al. (US 6,690,417).

Regarding claim 31, Shibata discloses a folding-type mobile communication terminal (foldable camera phone shown in Figs. 1-11 and abstract), comprising:

an upper body (20) comprising a display (21 in Fig. 1 and col. 9, lines 60-63);

a lower body (10) comprising a front side (the side where keypads are located as shown in Fig. 9) and a rear side (Figs. 3 & 7);

at least one terminal manipulation device (user control interface including the combination of *keypads 17, mode switch 16, operation dial 34 and zoom switch 11* in Figs. 3 & 9; col. 10, lines 4-20);

a hinge (31 in Figs. 1 & 3) configured to connect the lower body with the upper body at an upper end portion of the lower body and a lower end portion of the upper body (see Figs. 3 & 16), wherein the hinge is located at one lateral end portion of the end portion of the lower body (col. 9, lines 64-65);

an zoom camera (indicated by lens 33 in Figs. 2 & 3) coupled to a lateral side of the hinge and positioned to face outward from the lateral side of the hinge, wherein zooming of the zoom camera is performed responsive to user manipulation of the at

least one terminal manipulation device (i.e., zoom switch 11 is used to control zooming of the camera; see col. 10, lines 15-20 and col. 12, lines 25-27).

Although Shibata discloses a zoom camera as mentioned above, Shibata is just silent about an optical zoom. However, as taught by Yoshida, a foldable camera phone is implemented with an optical zoom camera (108 in Figs. 1 & 2) to allow the user to manually control movement of zoom lens to vary magnification ratio as desired (see Yoshida, col. 7, lines 26-34). Such optical zoom would produce a better enlarged image without reducing image resolution in comparison to a digital zoom.

Therefore, it would have been obvious to one of ordinary skill in the art to provide an optical zoom system in the camera phone in Shibata in view of the teaching Yoshida so as to allow the user to manually control movement of zoom lens vary magnification ratio without reducing image resolution in comparison to a digital zoom, thereby maintaining high image quality during zooming.

Regarding claim 32, as mentioned in claim 1, Shibata discloses the terminal manipulation device which is located on the front side of the lower body (see Fig. 9, wherein at least the mode switch 16 and keypads 17 are located on the front side of the lower body 10).

Regarding claim 33, Shibata also discloses that the terminal manipulation device (operation dial 34 in Fig. 3) positioned on the hinge.

Regarding claim 34, as clearly seen in Fig. 9 of Shibata, an input device (keypads 17) is located on the front side of the lower body.

Regarding claim 35, this claim is also met by the combined teaching of Shibata and Yoshida as analyzed in claim 31, wherein the photographing apparatus is indicated by the camera behind the lens (33). Shibata in view of Yoshida further discloses an inherent image sensor, a lens (33) positioned relative to the image sensor (see Shibata, col. 10, lines 4-20), a positioning mechanism providing optical zooming by causing relative motion between the lens and the image sensor responsive to user manipulation of the at least one terminal manipulation device (see Yoshida, col. 7, lines 26-34).

Regarding claim 36, see the analysis of claim 31.

Regarding claims 37-39, these claims are also met by the analyses of claims 32-34, respectively.

Regarding claims 41 & 46, Shibata in view of Yoshida also discloses that the terminal manipulation device (34, 11 in Fig. 3 of Shibata) is located at least one lateral surface of the lower body.

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7. Claims 42-44 and 47-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata et al. and Yoshida et al. and in further view of Ueda (US 4,847,647).

Regarding claim 44, although the combined teaching of Shibata and Yoshida teaches an optical zoom mechanism, wherein a motor and a driving mechanism are inherent in Yoshida as discussed in claim 31 (see Yoshida, col. 7, lines 26-34), Shibata and Yoshida are just silent about that details of the driving mechanism comprising: a rack having grooves; a pinion having teeth that meshes with the grooves; and a drive shaft, which is operatively connected to the motor, for rotating the pinion.

However, it is old and well known in the art to use a rack having grooves to gear with a pinion which is operatively connected to a motor for rotating the pinion so as to move the zoom lens as taught by Ueda, Figs. 1 & 4 and col. 2, lines 43-62.

Therefore, it would have been obvious to one of ordinary skill in the art to make the zoom driving mechanism for driving the zoom lens in the camera phone in the conventional fashion with simple components in view of teaching of Ueda for reducing size and cost of the device.

Regarding claims 42 & 43, these claims are also met by the analysis of claim 44.

Regarding claims 47-49, these claims are also met by the analyses of claims 42-44, respectively.

Allowable Subject Matter

8. Claims 25-28 are allowed.

The reason for allowance can be found in the Office Action mailed 7/6/2007.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NHAN T. TRAN whose telephone number is (571)272-7371. The examiner can normally be reached on Monday - Friday, 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571) 272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Nhan T. Tran/
Primary Examiner, Art Unit 2622